

A. H. HUMPHREY.

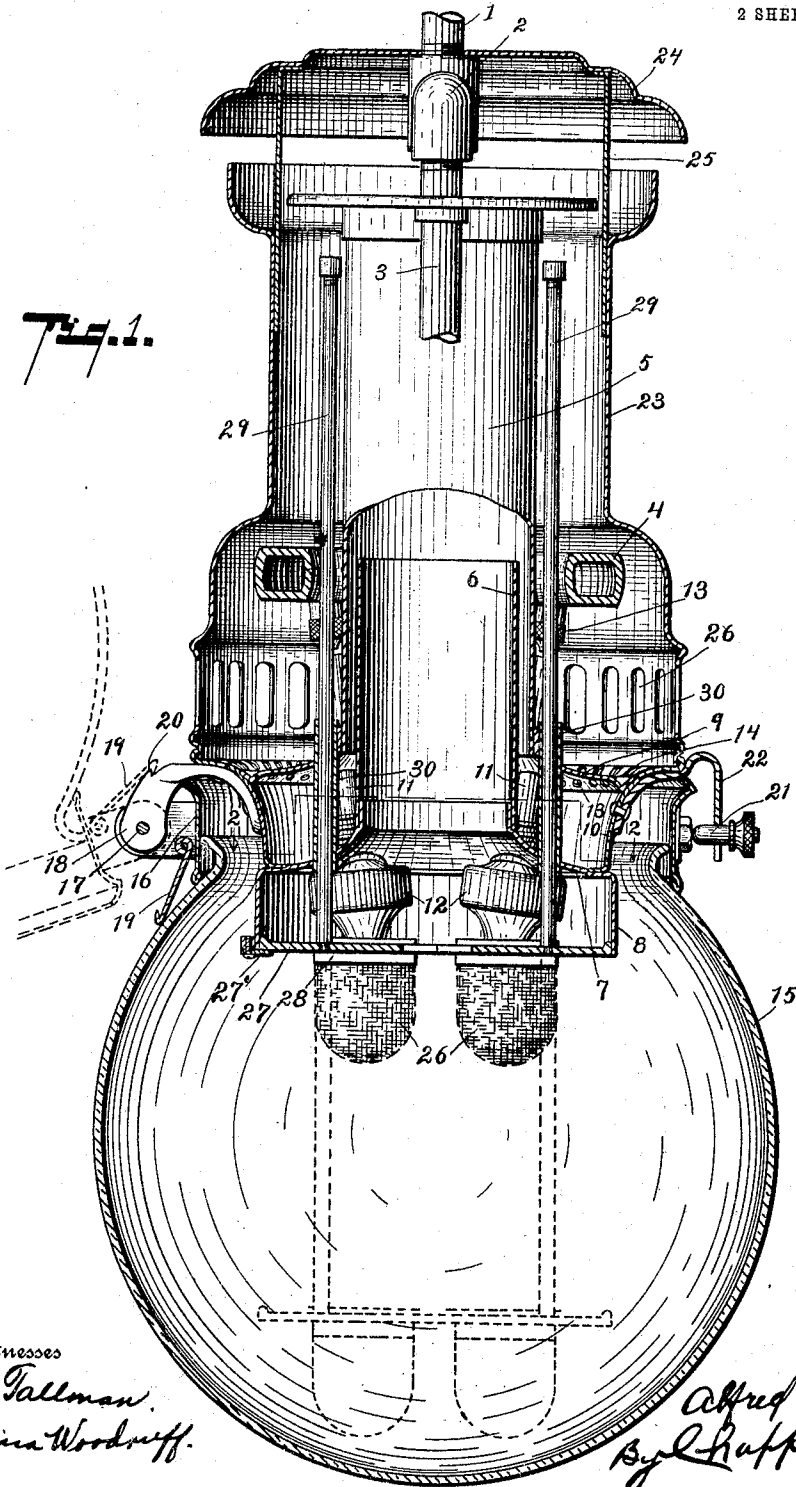
GAS LAMP.

APPLICATION FILED JAN. 16, 1909.

Patented Feb. 28, 1911.

2 SHEETS-SHEET 1.

985,261.



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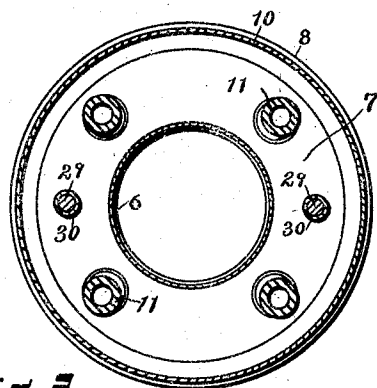


Fig. 2.

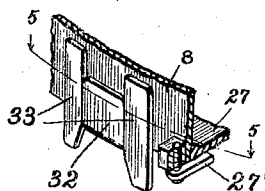


Fig. 4.

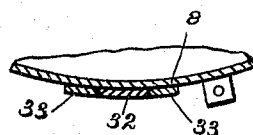


Fig. 5.

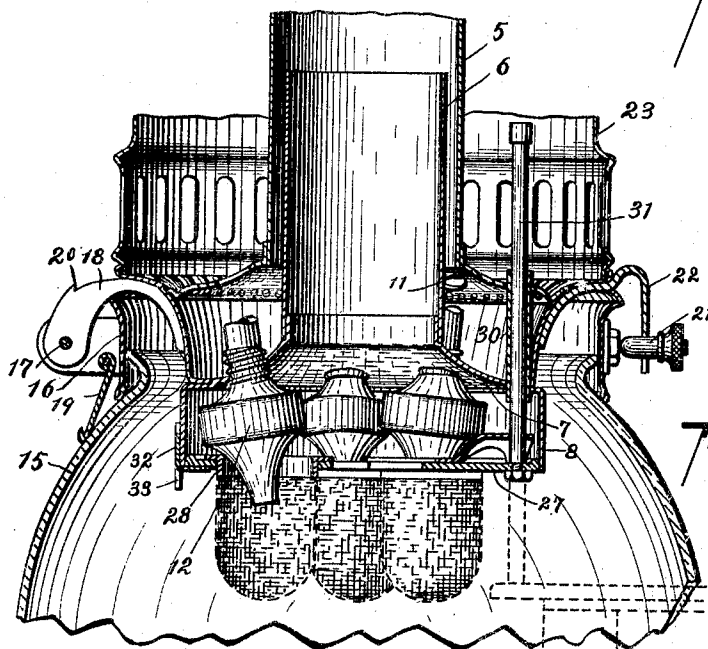


Fig. 6.

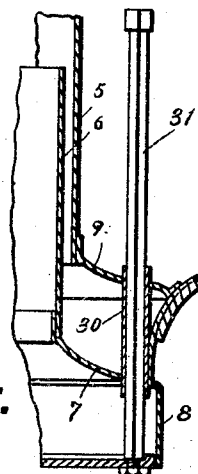


Fig. 7.

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UNITED STATES PATENT OFFICE.

ALFRED H. HUMPHREY, OF NEW YORK, N. Y.

GAS-LAMP.

985,261.

Specification of Letters Patent.

Patented Feb. 28, 1911.

Application filed January 16, 1909. Serial No. 472,700.

To all whom it may concern:

Be it known that I, ALFRED H. HUMPHREY, a citizen of the United States, residing at New York city, New York, have invented certain new and useful Improvements in Gas-Lamps, of which the following is a specification.

This invention relates to improvements in gas lamps.

My present invention relates particularly to improvements in gas lamps having inverted burners, such as is illustrated in U. S. Letters Patent No. 841,323, issued to me Jan. 15, 1907.

The main object of this invention is to provide in an improved gas lamp, an improved mantle support by which the mantles are effectively and safely supported, and one which is capable of very easy and rapid adjustment without danger of injury to the mantles carried thereby.

Further objects, and objects relating to structural details, will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification.

The invention is clearly defined and pointed out in the claims.

A structure embodying the features of my invention is clearly illustrated in the accompanying drawing, forming a part of this specification, in which:

Figure 1 is a detail vertical section of a structure embodying the features of my invention, parts being shown in full lines. Fig. 2 is a horizontal section taken on a line corresponding to the broken line 2—2 of Fig. 1. Fig. 3 is a detail vertical section of a modified construction. Fig. 4 is an enlarged detail perspective of the mantle support guide members of the modified structure shown in Fig. 3. Fig. 5 is an enlarged detail taken on a line corresponding to line 5—5 of Fig. 4. Fig. 6 is a detail vertical section showing a modified construction having a single supporting and guiding rod.

In the drawings, similar reference characters refer to similar parts throughout the several views, and the sectional views are taken looking in the direction of the little arrows at the ends of the section lines.

Referring to the drawing, 1 represents the gas supply pipe, which is provided with a coupling member 2, from which depends a

gas delivery arm 3. This is suitably connected to the gas delivery ring 4, the details of the connection not being here illustrated, as they form no part of the present invention. Through this ring 4 is arranged a draft chimney which is preferably made up of sections 5 and 6, the lower section 6 being arranged to project into the lower end of the upper section 5, and being spaced from the walls thereof, provides a passage for the admission of air from above the flange-like depending member 7 at the lower end of the lower chimney section 6. This flange is provided with a downwardly-projecting portion 8 at its outer edge. On the lower end of the upper chimney section 5 is an outwardly-projecting flange 9. A flange-like band 10 is mounted on the member 7, the outer edge of the member 8 being preferably secured to this band 10.

The mixing tubes 11 of the burners 12 are arranged through the flanges 7 and 9 in position to receive the gas from the delivery nozzles 13 on the delivery ring 4'. These burner tubes are preferably threaded through the lower flange 7, the upper flange 9 serving as a guide for their upper ends. Thus arranged, the burner tips are brought below the deflecting member 7, which serves to guide the product of combustion to the chimney, and a draft opening for the chimney is provided above the flange 7, this arrangement being a modification of the structure illustrated and described in my Letters Patent No. 863,182, dated August 3, 1907.

The flange 9 is provided with air inlet openings 9' for the passage of air to the chimney above the flange 7, which also causes the air to circulate about the burner tubes in passing to the chimney from above the flange 7, thereby assisting in cooling the same.

The flange 10 is provided with air inlet openings 14, through which the air passes into the globe 15, and thence to the burners. The globe 15 is carried by a globe-supporting ring or band 16, which is mounted by means of a pivot, as 17, upon the hinge member 18 carried by the band 10. To hold the globe in its open position, I preferably provide a hook 19 which engages over the catch 20 on the hinge member 18, as is indicated by dotted lines in Fig. 1.

The globe is retained in the closed position by means of the pin 21 which is adapt-

ed to engage the slotted arm 22 arranged oppositely of the hinge.

The outer casing 23 is preferably made vertically adjustable to afford access to the parts above the chimney flanges. The deflector 24 of the outer casing is slidably mounted on the supply pipe 1, and is connected to the outer casing by means of the straps 25. This connection for the casing to the deflector guides the casing in its vertical adjustment and holds the same in a spaced relation to the upper part of the chimney, the lower end of the casing being arranged to rest on the upper edge of flange 10. The outer casing is provided with air inlets 26, through which air passes to the burner tubes, and this also permits a circulation up through the outer casing, thereby assisting in cooling the parts.

The mantles 26 are suspended below the burner tips, being preferably carried by a support 27 common to all of them. This support is adapted to receive the ring-like mantle holders 28, the mantles being secured at their upper ends to the holders. The mantle support is retained in its operative position as by means of a suitable button, as 27'. The mantle support is supported in its inoperative position by means of the vertically adjustable supporting rods 29, which are arranged through the chimney flanges, and preferably between the chimney and the gas delivery ring 4, guiding sleeves 30 being provided therefor. These sleeves are carried by the chimney flanges, as is clearly illustrated in Fig. 1. These supporting rods 29 guide the mantle support in its vertical adjustment so that the mantles are brought into proper relation to the burner tips, and are not likely to be injured in their adjustment. By this arrangement, the mantles can be quickly replaced as occasion may require, and burned off and adjusted into operative position without danger of injury thereto.

In the modified construction shown in Fig. 3, a single supporting rod, as 31, is provided, so that the mantle support can be swung to one side, as is indicated by dotted lines in Fig. 3. In this construction, I provide the mantle plate with an upwardly-projecting guide arm 32, which is adapted to engage the guides 33 provided therefor on the chimney flange, see Figs. 4 and 5. This, in connection with the rod 31, effectively guides the mantle support into position so that it may be quickly adjusted without liability of injuring the mantles carried thereby.

In the modified construction shown in Fig. 6, the single supporting rod 31 is of such shape in cross section as to prevent the rotative movement of the mantle support so that it is guided into its vertical adjustment into place.

I have illustrated and described my invention in the form which I find very satisfactory in use, and in the construction illustrated, the guides also serve as a support for the mantle support when in its inoperative position, thereby performing a double function. The invention may, however, be very greatly varied in its structural embodiment without departing therefrom, and as such variations will readily appear to those skilled in the art to which this invention relates, I have not attempted to point them out herein. I desire, however, to be understood as claiming my invention broadly, as well as claiming the specific structure illustrated.

Having thus described my invention; what I claim as new and desire to secure by Letters Patent is:

1. In a gas lamp, the combination with a chimney having an outwardly projecting flange at its lower end; a plurality of burners arranged in an inverted position through said flange; separate mantles for said burners; a support for said mantles common to all of them, said mantles being removably mounted on said support; means for securing said support in operative position; a plurality of supporting rods projecting upwardly from said mantle support; guides for said rods disposed above said chimney flange, whereby said mantle support is supported to be vertically adjusted and is guided to its operative position; and an outer casing adapted to inclose said rods when the parts are in their operative position.

2. In a gas lamp, the combination with a chimney having an outwardly projecting flange at its lower end; a plurality of burners arranged in an inverted position through said flange separate mantles for said burners; a support for said mantles common to all of them, said mantles being removably mounted on said support; means for securing said support in operative position; a plurality of supporting rods projecting upwardly from said mantle support; and guides for said rods disposed above said chimney flange, whereby said mantle support is supported to be vertically adjusted and is guided to its operative position.

3. In a gas lamp, the combination with the chimney of a plurality of burners arranged in an inverted position; a gas delivery ring arranged about said chimney; separate mantles for said burners; a support for said mantles common to all of them, said mantles being removably mounted on said support; means for adjustably supporting said mantle support comprising a plurality of supporting rods projecting upwardly from said support, said rods being supported to slide up between the chimney and said gas supply ring to guide said support into its operative position and to support it in its inoperative position; and an

outer casing adapted to inclose the chimney, gas supply ring and mantle supporting rods when the parts are in their operative position.

5 4. In a gas lamp, the combination with a chimney, of a plurality of burners arranged in an inverted position; separate mantles for said burners; a support common to all of said mantles; means for securing said support in operative position; a plurality of adjustable supporting rods projecting upwardly from said support adapted to support said support in its inoperative position and guide it to its operative position; a globe adapted to inclose said mantles when in its closed position; a hinged support for said globe whereby it may be swung to one side to permit the lowering of said mantle support on its supporting rods and means for securing said globe in its open position.

20 5. The combination with a gas delivery ring, of a chimney arranged through said ring; an inverted burner; a mantle support; a plurality of vertically adjustable supporting rods projecting upwardly from said support, adapted to pass between the chimney and the gas supply ring when in their upper position; and an outer casing adapted to inclose said chimney rods and rings when

the parts are adjusted to their operative position. 30

6. The combination with a gas delivery ring, of a chimney arranged through said ring; an inverted burner; a mantle support; and a vertically adjustable supporting rod projecting upwardly from said support adapted to pass between the chimney and the gas supply ring when in its upper position; and an outer casing adapted to inclose said chimney rod and ring when the parts are adjusted to their operative position. 35 40

7. In a gas lamp, the combination with a chimney; a plurality of inverted burners; separate mantles therefor; a vertically adjustable support for said mantles; and co-acting members on said chimney and mantle support adapted to guide said support when the same is adjusted to its operative position to bring the several mantles carried thereby into proper relation to their respective burners. 45 50

In witness whereof, I have hereunto set my hand and seal in the presence of two witnesses.

ALFRED H. HUMPHREY. [L. S.]

Witnesses:

J. P. CONROY,
L. A. WOODS.